

NATIONAL RECORDER.

Containing Essays upon subjects connected with Political Economy, Science, Literature, &c.; Papers read before the Agricultural Society of Philadelphia; a Record of passing Events; Selections from Foreign Magazines, &c. &c.

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Miscellany.

From a Notice in the British Critic of Maria Graham's Three Months East of Rome.

Rumours of banditti in the neighbourhood were perpetually reaching Poli during Mrs. Graham's stay. Not long before her arrival, a discarded shepherd of the proprietor of a castle, near Olevano, having connected himself with these outlaws, resolved to use their aid in revenging himself upon his master. They knocked at the castle in the evening, and inquired for the proprietor; who, by accident, opened the door in person. Guessing at their intentions from their appearance, he answered that he would call him, and instantly made his escape by a back window. A poor German painter, who was in the house, was less fortunate, for the brigands, tired of waiting, carried him off as their prisoner. He was detained several days in the mountains, frequently led out for execution, and asked whether a stab upwards or downwards to the heart would cause most immediate death; the action at the same time apparently being suited to the word. After this pleasant dallying had lasted sufficiently long, they robbed him of fifty scudi, and dismissed him without farther ransom.

At length, early in August, a band of robbers seized two lads at Guadagnola. They were detained but one day; but this was sufficient time for them to observe some interesting particulars in the habits of their keepers. Story telling, cards, and *morra*, for a Louis d'or a chance, were their diversions. Their dress consisted of a blue velveteen jacket and breeches, sandals bound with leathern thongs; and a shirt open at the neck, with the collar turned back. The waistcoat was fastened with silver filligree buttons, two rows of which ornamented the jacket, and the whole had a very military air. A silk handkerchief was fastened to one of the buttonholes by a corner, and the remain-

der of it was tucked into the pocket. An ammunition belt, with silver clasps, was worn round the waist; another leathern belt was slung across the left shoulder, and held a knife, a fork, a spoon, and a hanger. Every robber had a silver heart, with a picture of the Madonna and Bambino in it, suspended by a red ribbon from his neck, and fastened by another to his left side. High crowned hats, with red and white bands at the top, and large gold ~~earrings~~ drops ~~decorated~~ ^{comprised} their costume. Many of them had gold watches, and other trinkets, which they boasted of as the plunder of English travellers.

Before the seizure of the boys, the banditti, it seems, had visited some shepherds on the mountains above Poli, and after regaling themselves with fresh mutton, had been content with imposing an oath of secrecy under pain of death upon their unwilling entertainers. They talked freely of their habits of life, maintaining that they arose less from choice than necessity. "We know," they said, "that we are likely to die a violent death, but in our hour of need we have these," touching their muskets, "to struggle for our lives with; and this," kissing the image of the Virgin, "to make our death easy!" How precisely similar are the effects produced by the Antipodes of Popery and Calvinism on the ruffian at the gallows!

A requisition was sent, within a few days, to an obnoxious individual in Poli, ordering him, as he valued both his personal safety, and that of his flocks, to furnish a certain number of velvet suits, linen shirts, drawers, and stout great coats, and to deposit them on a particular spot at a given day. With this demand, after consulting the government at Rome, respecting the protection which they could insure him if he refused, he thought it most prudent to comply. A night attack was expected in the town, and the civic guard accordingly was called out. It consisted of about fourteen young men, armed with muskets and fowling pieces of various construction. They set out in pursuit of the

robbers, many of them without powder, and few with more than a second charge; on the afternoon of the following day they returned, having found a spot which bore evident marks of the recent occupation and hasty removal of the objects of their search. Two similar expeditions, equally fruitless in their result, were subsequently undertaken.

Meantime the brigands, whose main body was 130 strong, though they never mustered more than thirteen in the immediate neighbourhood of Poli, had carried off signor Cherubini, the surgeon of Castel Madama. Mrs. Graham had an opportunity of procuring an account of the good doctor's adventures, written by himself for a friend, from which we shall select such particulars as appear most interesting.

Signor Cherubini was journeying on a professional visit, in company with Marasca, the factor of the person who had sent for him, when he was ~~unwillingly~~ and by two robbers as the prince of Castel Madama. In spite of his case of lancets, his bag of surgical instruments, and his pertinacious assurances to the contrary, they marched him up the steeps of the mountains to their chief, who desired him to think about his ransom. He was then ordered to write to his friend at Tivoli, requesting him to send two thousand crowns; and a peasant, who was seen ploughing at a short distance, was seized, in order to convey the letter. A second was soon after despatched to Castel Madama by the disconsolate doctor, instructing his friends to convert all his substance into money, and to forward it to him on the instant. Soon after the messenger left him,

"I saw," says signor Cherubini, "the factor Marasca walking about carelessly among the brigands, looking at their arms, and making angry gestures; but he did not speak. Shortly after, he came and sat down by me; it was then that the chief, having a large stick in his hand, came up to him, and without saying a single word, gave him a blow on the back of the head just where it joins the neck. It did not kill him, so he rose and cried, 'I have a wife and children; for God's sake spare my life, and thus saying, he defended himself as well as he could with his hands. Other brigands closed round him; a struggle ensued, and they rolled together down a steep precipice. I closed my eyes, my head dropped on my breast, I heard a cry or two, but I seemed to have lost all sensation. In a very short time the brigands returned, and I saw the chief thrust his

dagger, still stained with blood, into its sheath; then turning to me, he announced the death of the factor in these very words: 'Do not fear: we have killed the factor because he was a sbirro;* such as you are not sbirri; then, he was of no use among us. He looked at our arms, and seemed disposed to murmur; and if the force had come up, he might have been dangerous.' And thus they got rid of Marasca."

In the evening, five hundred crowns, all that the town could furnish, arrived from Tivoli, but the prisoner was still detained, in the hope of a farther answer from Castel Madama.

"I continuell to press him to let me go before night, which was now drawing on apace, saying, that perhaps it had not been possible to procure any more money at Castel Madama; and that if I remained out all night on the hill in the cold air, it would have been better to have killed me at once. Then the chief stopped me, and bade me take good care how I said such things, for that to them killing a man was a matter of perfect indifference. The same thing was also said to me by another outlaw, who gave me his arm during our rocky journey."

After marching all night in the rain, the party halted at a sheepfold. Here Cherubini fell asleep from fatigue: when he awoke, he found that a sheep had been killed, skinned, dressed, and eaten, with the exception of a few slices, which the chief had spitted on a ramrod, and hospitably roasted for his guest. A little wine was found in a barrel on the threshing floor, which they drank; but this rarely happens; they are fearful that fresh wine may be drugged; and whenever it is brought, they make the bearers drink largely of it; and then if in two hours no bad symptoms appear, they venture to use it themselves.

No account having arrived from Castel Madama, a second message was despatched by another peasant, denouncing certain death against Cherubini, unless 800 crowns were returned by the following day. A good natured brigand proposed ("I don't know why," observes the doctor) to send one of the prisoner's ears with the letter; but the chief (and we don't know why) did not approve of the proposal. There is some-

* "Sbirro, government spy, and at the same time, soldier and constable. Before the revolution, they were the only police-officers, and were terrible in proportion as they were secret; and no man knew whether his own brother might not be one. The French disbanded them. They have been lately re-established."

thing very picturesque in the account of the ensuing night.

"When we again reached the thicket, and found a fit place, we all lay down to sleep. I had the skins to rest on as before, and the chief wrapped my legs in his own greatcoat, and he and the second chief lay on each side of me. Two sentinels were placed to keep watch, and to prevent the shepherd with the provisions from making his escape. I know not how long we rested before one of the sentinels came, and gave notice of day-break. 'Come again, when it is lighter,' said the chief; and all was again quiet. I turned my face so as not to see the brigands, and dozed a little, till I was roused by the cry of some wild bird. I am not superstitious: but I had often heard that the shriek of the owl foreboded evil; and, in the state of spirits in which I was, every thing had more than its usual effect on me. I started, and said, 'What bird was that?' They answered, 'A hawk.' 'Thank God,' I replied, and lay down again. Among my other sufferings, I cannot forget the stinging and humming of the gnats, which fastened on my face and throat; but, after the death of poor Marasca, I dared not even raise my hand to drive them away, lest it should be taken for a sign of impatience. A little after this we all arose, and walked on for about an hour, when we came to a little open space, in the midst of the thicket, where the brigands began to eat their cold meat, inviting me to join them; but I only took a little new cheese, without bread. After they had breakfasted, they lay down to sleep, the second chief giving me his greatcoat to wrap myself in, as the ground was damp. While the others slept, one of them began to read in a little book, which I understood to be the romance of the Cavalier Meschino. After about an hour they all arose, and filed off, one by one, to a higher station, leaving a single sentinel to guard me and the shepherd."

Six hundred crowns arrived at length, and Cherubini was released. The inhabitants of Tivoli and Castel Madama had clubbed together for the preservation of their Esculapius, who concludes his eventful story with a hearty prayer, "that God will save him from all the bad consequences which commonly arise out of similar misfortunes."

FRANCIS CORBIN.

Departed this life on the 23d ultimo, at his seat, "The Reeds," Francis Corbin, esq.

at the age of sixty-two years. His death was occasioned by an attack of the gout, to which he has been occasionally subject.

Mr. Corbin was the youngest son of colonel Richard Corbin, a gentleman of a highly cultivated mind, and who held a distinguished rank in the government of Virginia in its colonial state.

The son was sent to England at an early age, for his education, which was commenced at Canterbury school, and finished at the University of Cambridge. He afterwards read law at the Inner Temple, in London.

Immediately after the peace, in 1783, he returned to his native state, bringing with him a mind well stored with classical studies; and what was far more meritorious, an ardent love of country, and principles of liberty congenial with its new rank as an independent nation, and with its new form as a republican government.

His superior talents and engaging manners attracted, at once, the notice and confidence of his fellow citizens, whose suffrages gave him a seat in the legislature of the state. As a member of this body, though young and under the disadvantage of his long absence, he was able to bear an important part in the legislative business. In debate, he gave constant proof of his enlarged information, of his reasoning powers, and of an elocution uncommonly graceful and persuasive. He continued a representative of his country, until the great crisis, which ended in the change of the original confederation of the states into the present government of the United States. Mr. Corbin was among the first to espouse and promote the efforts for bringing about the appointment of the General Convention, which had that for its object; and he was not overlooked in the choice of worthies for the Convention of Virginia, when the plan proposed by the General Convention was submitted to the several states for their sanction.

In this select assembly, Mr. Corbin's name is on the list of those who bore a conspicuous part in the discussions. His speeches in the published proceedings show that his mind embraced the whole subject in its true principles, and various aspects; and that he was able to give to his arguments, all the advantages depending on a suavity of manner, and a polish of language.

After the new constitution had been organized and put into operation, he was annually re-elected for a number of years, as a delegate to the legislature of the state, where he always sustained the reputation which his talents had acquired.

For many years previous to his death, he had withdrawn himself from public life, and devoted much of his time to the indulgence of his taste for literature and philosophy, and to the guidance of the education of his children, of whom as a parent he had every reason to be proud. The other portions of his time were given to the care of his ample estate, and to the society of his numerous friends, who could no where enjoy more of the sweets of hospitality, and the repast of elegant and interesting conversation, than under his roof: nor could any one enjoy more fully those social scenes than Mr. Corbin himself.

But, alas! Death, with his unsparing hand, has translated him forever from all sublunary enjoyments: leaving in sorrow the friends who admired him; and in tears an amiable family, in the bitterest of them, her who was bound to him by the most tender of the ties that have been severed.

This nasty tribute to his memory is offered by one who, having partaken largely of his friendly sentiments whilst living, wished to lay on his tomb some token of what was felt in return. [Nat. Int.

HUBER ON ANTS AND BEES.

(Concluded from p. 355.)

The memoir on ants is by the son of the author of the former work. It exhibits the results of an extensive and well conducted series of researches into the habits of that industrious race of insects. Their character, their social economy, their wars, and their alliances are described in a very distinct and agreeable manner; and the book has had the good fortune of falling into the hands of an effective editor, who, in addition to a respectably executed translation, has increased the value of his original by instructive notes. The title is, however, somewhat too comprehensive; since the work refers mainly to such varieties of the ant as came immediately under the author's inspection, while those which inhabit other climes and countries, are only incidentally and partially adverted to. In nothing are the skill and industry of this wonderful insect more remarkable, than in the construction of their habitations. The fallow ant covers its nest with leaves, sticks, and all kinds of miscellaneous materials, disposed apparently in confusion, but really with the utmost care, and in such a manner as effectually to defend it against the entrance of its enemies, and the inclemencies of the sky. During the

day, in fine weather, the barriers are removed, and the avenues thrown open for the free passage of the bustling inhabitants: as evening approaches, the defences are replaced, the barricades strengthened, the guards stationed, and every thing is secured, while the sheltered citizens enjoy their repose. The interior is distributed into halls and galleries constructed of earth tempered with rain-water. The 'hill' of the mason ant is built on the same general principles, but with more regularity and compactness: it contains sometimes not fewer than forty stories, half above ground, and an equal portion below the surface. Some tribes display the utmost sagacity in availing themselves of any accidental position of blades of grass, stalks of corn, or other slight materials, in the formation of their lodges. Should one of these shrewd creatures find two fragments of straw lying at right angles, it makes use of them as the beams and joists of its little chamber, and filling up the spaces with moistened earth, soon completes a new apartment.

"Those ants who lay the foundation of a wall, a chamber, or gallery, from working separately, occasion now and then a want of coincidence in the parts of the same or different objects. Such examples are of no unfrequent occurrence, but they by no means embarrass them. What follows proves that the workman on discovering his error, knew how to rectify it.

"A wall had been erected with the view of sustaining a vaulted ceiling, still incomplete, that had been projected from the wall of the opposite chamber. The workman who began constructing it, had given it too little elevation to meet the opposite partition upon which it was to rest. Had it been continued on the original plan, it must infallibly have met the wall at about one half of its height, and this it was necessary to avoid. This state of things very forcibly claimed my attention; when one of the ants, arriving at the place, and visiting the works, appeared to be struck by the difficulty which presented itself; but this it soon obviated, by taking down the ceiling and raising the wall upon which it reposed. It then, in my presence, constructed a new ceiling with the fragments of the former one."

The timber ants construct their nests in the trunk or root of trees, which they excavate into innumerable stories, each consisting of many chambers and passages. The floors and ceilings are reduced to the thinness of card, and assume, probably by

the action of the formic acid, a blackish hue. This latter circumstance is, however, peculiar to one species only.

Finding that it was impossible, while confining himself to the common modes of observation, to make himself acquainted with the interior economy of the ant hill, Mr. Huber contrived an apparatus which, with some management, enabled him to witness all the different movements and processes of his ants. He watched the successive stages of their existence, the modes of nurture and feeding, and the various habits of distinct species. By these means, he has established a chain of facts which affords, if not a complete, a satisfactory and connected history of the ant in its general character and manners, and which supplies a frame-work that other inquirers may more easily fill up. Among the objects to which he more specially directed his attention, was the ascertainment of the modes of communication between the individuals of these little communities. In illustration of this point, he describes the following amusing scene.

"The feet of the artificial ant hill, or *ruche*, were plunged in vessels constantly filled with water; this expedient, originally adopted to arrest the passage of the ants, proved to them a fruitful source of delight, for they there slaked their thirst (like butterflies, bees, and other insects), during the great heat of summer. One day, whilst they were assembled at the foot of the *ruche*, occupied in licking up the little drops which filtered between the fibres of the wood, (which they preferred to the taking it from the basin itself,) I amused myself in disturbing them. This trifling experiment gave rise to a scene which appeared conclusive. The greater part of the ants immediately ascended the leg of the *ruche*; a few, however, remained, whom my presence had not alarmed, and who continued carousing. But one of those who had regained the *ruche*, came back and approached one of its companions, who appeared fully absorbed in the pleasure of drinking; it pushed it with its mandibles several times successively, raising and lowering its head alternately, and at length succeeded in driving it off. The officious ant then reached another, who was engaged in the same office, and endeavoured to drive it off also, by striking the abdomen behind: but seeing that it did not appear to, or would not, understand its meaning, it approached the corslet, and gave it two or three blows with the end of its mandibles. The ant, being at length

apprised of the necessity of withdrawing, passed precipitately to the bell-glass; a third, warned in the same manner, and by the same ant, quickly regained its habitation; but a fourth, who remained alone at the water's edge, would not retire, notwithstanding numerous proofs of the solicitude of which it was the object: it appeared to pay no attention to the reiterated blows of its friendly monitor, who at length seized it by one of its legs, and dragged it rather roughly. The toper, however, returned, keeping his large pincers extended with all the appearance of rage, and again stationed himself to quaff the delightful beverage; but its companion would give it no quarter; coming in front, it seized it by its mandibles, and dragged it very rapidly into the ant hill."

One of the most remarkable peculiarities in the history of the ant, is to be found in the connexion subsisting between it and the *puceron* tribe of insects. The latter are to the former, what his herds of milch cattle are to man: they are collected and guarded by the ant with the utmost care, and the sweet glutinous excretion ejected by these *Aphides*, supplies the little labourer with his principal nutriment. Mr. Huber found these animals in various situations near the different ant hills; frequently at the roots of plants, sometimes in the nests themselves, but always treated with the most solicitous attention, carried off by the ants on the approach of danger, and in all respects exhibiting the appearance of complete subserviency to the control of their owners. "Who could have imagined that the ants were a *pastoral tribe*?" The ant does not find it necessary to wait for the regular period of producing this liquid. When hungry, he strolls among his insect cattle, strikes one of them gently but rapidly with his antennæ, and the signal is always obeyed when the *puceron* has not been previously exhausted by other *milkers*. It is a striking coincidence, that the ant and the *puceron* become torpid at precisely the same reduction of temperature, so that when the former revives from its hybernal sleep, it finds its nourisher awake and ready for its supply. The eggs of the *aphides* receive from the ant the same care and attention as it bestows on its own offspring.

Not less extraordinary is the discovery, the credit of which is due to Mr. Huber, of a species of ants which attacks the nests of other species, for the purpose of carrying off their young. The rufescent ant, sometimes called by him the *amazon* and the

legionary from its exclusively warlike habits, does not construct its own nest, nor tend its own young, except in cases of necessity. He was accidentally directed to this discovery by observing, in 1804, a close column of this tribe traversing the road. Attracted by the sight, he traced the movements of the insects, and saw them approach a hill tenanted by the ash coloured ant, and, after a "short but obstinate conflict," put the garrison to flight. The next step was to make an opening with their teeth in the defences of the nest, and to enter by the breach; but they speedily returned, "each bearing off in its mouth a larva or a pupa," with which they returned to their own abode. Dr. Johnson informs us, in a note, that

"The tactics of these marauders vary with the enemy they have to contend with; in this instance, conscious of carrying off their booty, without further opposition from the ash coloured ants, the army no longer keeps in rank, but separates into straggling parties, each hastening by a different route, to deposit their spoil in the common treasury: but, when these intrepid adventurers attack a nest of mining ants, and return successful, they are then obliged, from the known spirit and courage of the latter, to keep close order, and march in a body to the very gates of their citadel: as it not unfrequently happens, they are followed and harassed the whole way by the mining ants, who leave no exertion untried to recover their treasure."

Mr. Huber frequently witnessed these expeditions, and minutely noted the various movements which preceded and followed them. He found that the hills of the rufescence or martial ant, were uniformly inhabited by them in common with some other species of their own race, commonly the ash coloured kind; and that while the former, engaging in a sort of slave trade, supplied the nest with the larva of "negro" labourers, the latter, when they attained growth, became perfectly domiciliated, took charge of all the household business, welcomed the *moss troopers* on their successful return from their predatory forays, and, in one remarkable instance, assailed with direct violence a party which came back empty handed. There is another variety which subsists in the same manner, with this difference, that, unlike the rufescence tribe, while it occasionally sets out on plundering excursions, it is not only domesticated with its "negroes," but assists them in their labours.

BELZONI'S DISCOVERIES IN EGYPT AND NUBIA.

Extracts from the British Review.

Of the extensive ruins at Thebes, Mr. Belzoni has given a general idea in one of his engravings, and in another a small sketch of part of the interior of the great temple, as well as of the colossal bust which was uncovered. These must be inspected, in order to form an adequate conception of the grand scale upon which they were executed.

"I was lost," he continues, "in contemplation of so many objects: and being alone in such a place, my mind was impressed with ideas of such solemnity, that for some time I was unconscious whether I were on terrestrial ground, or in some other planet.

"I had seen the temple of Tentyra, and I still acknowledge, that nothing can exceed that edifice in point of preservation, and in the beauty of its workmanship and sculpture; but here I was lost in a mass of colossal objects, every one of which was more than sufficient, of itself alone, to attract my whole attention. How can I describe my sensations at that moment! I seemed alone in the midst of all that is most sacred in the world; a forest of enormous columns, adorned all round with beautiful figures, and various ornaments, from the top to the bottom; the graceful shape of the lotus which forms their capitals, and is so well proportioned to the columns, that it gives to the view the most pleasing effect; the gates, the walls, the pedestals, and the architraves, also adorned in every part with symbolical figures in basso relievio and intaglio, representing battles, processions, triumphs, feasts, offerings, and sacrifices, all relating no doubt to the ancient history of the country; the sanctuary, wholly formed of fine red granite, with the various obelisks standing before it, proclaiming to the distant passenger, 'Here is the seat of holiness;' the high portals, seen at a distance from the openings to this vast labyrinth of edifices; the various groups of ruins of the other temples within sight; these altogether had such an effect upon my soul, as to separate me in imagination from the rest of mortals, exalt me on high over all, and cause me to forget entirely the trifles and follies of life. I was happy for a whole day, which escaped like a flash of lightning; but the obscurity of the night caused me to stumble over one large block of stone, and to break my nose against another, which, dissolving the enchantment, brought me to my senses again. It was quite late when I returned to Luxor,

to the hut of an Arab, who ceded to me part of his chamber, and a mat, which afforded me an excellent bed."

His further researches being prevented by the arrival of the French agents, he returned to Thebes; and, mooring his bark at Luxor, recommenced his operations with what assistance he could obtain. Two objects now jointly claimed his attention, viz. the exploring of the sepulchres of the ancient Egyptians at Gournou, and the prosecution of the excavations at Carnac.

Gournou is a tract of rocks about two miles in length, at the foot of the Libyan mountains, on the west of Thebes, and was the burial-place of the great city of a hundred gates. Every part of these rocks is cut out by art, in the form of large and small chambers, each of which has its separate entrance; and though they are very close to each other, they seldom have any interior communication from one to another. The inhabitants of this region are described as being superior to any other Arabs in cunning and deceit, and the most independent of any in Egypt. They boast that they were the last whom the French were able to subdue, and that, when subdued, they compelled their conquerors to pay them whatever they demanded for their labour. They have refused submission both to the Mamelukes and to the Bashaw: consequently they have undergone the severest punishments, and have been hunted down like wild beasts. Their hiding places in the rocks are almost impregnable.

Into the mansions of the dead of former ages our traveller penetrated; and though the difficulty of visiting these recesses made it impossible to give an adequate description of them and their inhabitants, yet he has succeeded in conveying to his readers some idea of the danger to which he exposed himself in exploring them.

"A traveller is generally satisfied when he has seen the large hall, the gallery, the staircase, and as far as he can conveniently go: besides, he is taken up with the strange works he observes cut in various places, and painted on each side of the walls; so that when he comes to a narrow and difficult passage, or to have to descend to the bottom of a well or cavity, he declines taking such trouble, naturally supposing that he cannot see in these abysses any thing so magnificent as what he sees above, and consequently deeming it useless to proceed any farther. Of some of these tombs many persons could not withstand the suffocating air, which often causes fainting. A vast quantity of dust rises so fine that it enters into

the throat and nostrils, and chokes the nose and mouth to such a degree, that it requires great power of lungs to resist it and the strong effluvia of the mummies. This is not all; the entry or passage, where the bodies are, is roughly cut in the rocks, and the falling of the sand from the upper part or ceiling of the passage causes it to be nearly filled up. In some places there is not more than a vacancy of a foot left, which you must contrive to pass through in a creeping posture like a snail, on pointed and keen stones, that cut like glass. After getting through these passages, some of them two or three hundred yards long, you generally find a more commodious place, perhaps high enough to sit. But what a place of rest! surrounded by bodies, by heaps of mummies in all directions; which, previous to my being accustomed to the sight, impressed me with horror. The blackness of the wall, the faint light given by the candles or torches for want of air, the different objects that surrounded me, seeming to converse with each other, and the Arabs with the candles or torches in their hands, naked and covered with dust, themselves resembling living mummies, absolutely formed a scene that cannot be described. In such a situation I found myself several times, and often returned exhausted and fainting, till at last I became inured to it, and indifferent to what I suffered, except from the dust, which never failed to choke my throat and nose; and though fortunately, I am destitute of the sense of smelling, I could taste that the mummies were rather unpleasant to swallow. After the exertion of entering into such a place, through a passage of fifty, a hundred, three hundred, or perhaps six hundred yards, nearly overcome, I sought a resting place, found one, and contrived to sit; but when my weight bore on the body of an Egyptian, it crushed it like a bandbox. I naturally had recourse to my hands to sustain my weight, but they found no better support; so that I sunk altogether among the broken mummies, with a crash of bones; rags, and wooden cases, which raised such a dust as kept me motionless for a quarter of an hour, waiting till it subsided again. I could not remove from the place, however, without increasing it, and every step I took I crushed a mummy in some part or other. Once I was conducted from such a place to another resembling it, through a passage of about twenty feet in length, and no wider than that a body could be forced through. It was choked with mummies, and I could not pass without putting my face in contact with that of some decayed Egyptian: but as

the passage inclined downwards, my own weight helped me on: however, I could not avoid being covered with bones, legs, arms, and heads rolling from above. Thus I proceeded from one cave to another, all full of mummies piled up in various ways, some standing, some lying, and some on their heads. The purpose of my researches was to rob the Egyptians of their papyri; of which I found a few hidden in their breasts, under their arms, in the space above the knees, or on the legs, and covered by the numerous folds of cloth, that envelop the mummy. The people of Gournou, who make a trade of antiquities of this sort, are very jealous of strangers, and keep them as secret as possible, deceiving travellers by pretending that they have arrived at the end of the pits, when they are scarcely at the entrance. I could never prevail on them to conduct me into these places till this my second voyage, when I succeeded in obtaining admission into any cave where mummies were to be seen.

"My permanent residence in Thebes was the cause of my success. The Arabs saw that I paid particular attention to the situation of the entrance into the tombs, and that they could not avoid being seen by me when they were at work digging in search of a new tomb, though they were very cautious when any stranger is in Gournou not to let it be known where they go to open the earth; and as travellers generally remain in that place a few days only, they used to leave off digging during that time. If any traveller be curious enough to ask to examine the interior of a tomb, they are ready to show him one immediately, and conduct him to some of the old tombs, where he sees nothing but the grottoes in which mummies formerly had been deposited, or where there are but few, and these already plundered; so that he can form but a poor idea of the real tombs, where the remains were originally placed.

"The people of Gournou live in the entrance of such caves as have already been opened, and by making partitions with earthen walls, they form habitations for themselves, as well as for their cows, camels, buffaloes, sheep, goats, dogs, &c. I do not know whether it is because they are so few in number, that the government takes so little notice of what they do; but it is certain, that they are the most unruly people in Egypt. At various times many of them have been destroyed, so that they are reduced from three thousand, the number they formerly reckoned, to three hundred, which form the population of the present

day. They have no mosque, nor do they care for one; for though they have at their disposal a great quantity of all sorts of bricks, which abound in every part of Gournou, from the surrounding tombs, they have never built a single house. They are forced to cultivate a small tract of land, extending from the rocks to the Nile, about a mile in breadth, and two and a half in length; and even this is in part neglected; for if left to their own will, they would never take a spade in their hands, except when they go to dig for mummies; which they find to be a more profitable employment than agriculture. This is the fault of travellers, who are so pleased the moment they are presented with any piece of antiquity, that, without thinking of the injury resulting from the example to their successors, they give a great deal more than the people really expect. Hence it has arisen, that they now set such an enormous price on antiquities, and in particular on papyri. Some of them have accumulated a considerable sum of money, and are become so indifferent, that they remain idle, unless whatever price they demand be given them; and it is to be observed, that it is a fixed point in their minds, that the Franks would not be so liberal, unless the articles were worth ten times as much as they pay for them.

"The Fellahs of Geurnou who dig for antiquities are sometimes divided into parties, and have their chiefs over each; so that what is found by any of the party is sold, and the money divided among them all. They are apparently very true to each other, and particularly in cheating strangers; but when they can find a good opportunity, they do not scruple to cheat each other also."

SARAH, DUCHESS OF MARLBOROUGH.

Sarah Jennings, afterwards duchess of Marlborough, was descended from a good family in Hertfordshire, and was coheiress with Miss Jennings, so celebrated at the court of Charles II. and who married the duke of Tyrconnel.

At a very early age, Miss Sarah Jennings, was, by powerful recommendation, introduced at the court of Charles, and was appointed one of the maids of honour to the duchess of York; in which situation the duke of Marlborough, then colonel Churchill, made her an offer of marriage; which could not be but highly gratifying to the young lady, as the colonel was the handsomest man of his time, the known favourite of the king's mistress, the duchess

of Cleveland, and the court was then proverbial for female beauties. Lady Churchill, soon after her marriage, was made one of the ladies of the bedchamber to princess Anne.

After the death of Charles II. nothing remarkable happened to the duchess till the revolution; and after king William was seated on the throne, lady Churchill, who was looked on as the princess Anne's constant adviser, was regarded with an evil eye at court. She was certainly known to have a great ascendancy over her royal highness, and application was continually made to lady Churchill to prevail on her mistress to waive all pretensions, and to accept such a revenue as their majesties should think proper to bestow on her. But flattery and threatenings were exerted in vain; she resolved not to advise her royal mistress to compromise her dignity; and the princess was so pleased with her behaviour, that she settled on her a pension of one thousand pounds per annum; and what must ever redound to the honour of the duchess of Marlborough, the princess Anne always found her an unshaken friend, in whose bosom she could safely confide every secret.

When king William died, it could not be expected that the duchess of Marlborough should feel much regret for one who had ever treated her with harshness; but she never, as her enemies asserted, evinced any indecorous joy: though when queen Anne ascended the throne, the distinction her grace experienced was greater than ever, and her favour was the only channel to the queen's. This failed not to soothe the vanity of the duchess, but we cannot altogether give credit to the records of that insolence detailed by Horace Walpole, the late lord Orford; she was witty, and wit is too apt to gain its possessors enemies. What Walpole quotes as a proof of her insolence, may, perhaps, more justly be considered a smart saying. In a succeeding reign, when the prince of Orange came over to marry the princess royal, Anne, a boarded gallery, with a pent roof, was erected for the procession from the windows of the drawing room at St. James's across the gardens of the Lutheran Chapel, in the Friary. The prince being indisposed, and in consequence having repaired to Bath, the marriage was deferred till his recovery. The boarded gallery, however, remained, and darkened the windows of Marlborough house; upon which the duchess said, "I wonder when my neighbour George will take away his *Orange-chest*."

Walpole says also, that her insolence to queen Anne was so great, that if her majesty dropped her gloves or her fan, the duchess would pick them up, return them to the queen, and then turn away her head, and look as if she experienced some disagreeable smell. This assertion we can never believe; the duchess was too well bred to be guilty of such rudeness; but how far private feeling, at what she considered the ingratitude of the great, might cause an apparent difference in her conduct, we cannot determine; certain it is her favour was then fast declining, and soon after the queen bestowed all her patronage and confidence on the intriguing Mrs. Masham. It should be remembered, that the duchess of Marlborough, when in power, always used it moderately, and with a modesty that reflected the highest honour on her principles. The queen was a bigotted tory, and the duchess, professing contrary opinions, ever sought, by the most persuasive and gentle means, to wean her majesty from what, after the revolution, seemed unpleasing to a people sensible of their privileges, and more in love than ever with liberty.

But though the duchess did not argue with the boldness of an equal, she never flattered her royal mistress. Mrs. Masham, however, had prepared the way for every odious libel to be disseminated both against the duke and duchess, and soon after, the latter resigned her office, and the duke was turned out of his employments.

On the accession of George I. to the British throne, his grace was again created captain-general, colonel of the first regiment of guards, and master of the ordnance; but weary of the fatigues of a court, the duchess never appeared in any public scene after the death of queen Anne. She lost her illustrious and heroic husband on the 16th of June, 1722, at Windsor Lodge, where he expired in the 74th year of his age.

This noble pair had lived upwards of forty years together in the most perfect wedded harmony. To testify, as much as lay in her power, her value and affection for her illustrious husband, the duchess had him buried with great magnificence: and when the king offered to defray the expenses of the funeral, she declared no one should share with her that honour; and though the burial charges amounted to several thousand pounds, she promptly and cheerfully paid them; not only showing thereby her love for the deceased, but giving a convincing proof to her enemies, that

she was not, as they have alleged, actuated by an insatiable spirit of avarice.

After the duke's death, she proved herself worthy, in the regulation of her conduct, to have been the wife of so extraordinary a hero. She not only founded those alms-houses at St. Albans, for which she left such ample provision, but she took care that her private charities should be bestowed on proper objects; and her bounty was particularly shown to those who had once enjoyed prosperity, but who had fallen to decay by unavoidable misfortunes.

The greatest fault in Sarah, duchess of Marlborough, was an impetuous and haughty manner of speaking; and this, no doubt, gave her enemies occasion to accuse her of insolence to her patroness, the queen: she was no flatterer, as we have before remarked, and might, perhaps, be rather too hasty in her resolutions. We have endeavoured, from the most authentic sources, to do justice to the memory of this illustrious lady, and to set her actions in their true light; we shall, therefore, close this sketch by merely stating, that she departed this life, at her house in the Friary, on the 18th of October, 1744.

FROM THE LADIES' MONTHLY MUSEUM.

Essay on the Credulity of the British in Matters unconnected with Religion and Superstition.

As there is in the face of every man some peculiarity of features which distinguishes his face from the faces of all other men, so there is in the mind of every nation some peculiarity of disposition which distinguishes the mind of that nation from the minds of all other nations. To discover the causes of these last peculiarities has been the employment of the greatest and most revered philosophers, and from their inquiries and observations on this head, they have, in many cases, been enabled to form decisions, which no wise man endeavours, or thinks it possible, to reverse.

But those peculiarities of disposition, on the causes of which philosophers seem able to decide properly, are those in the formation of which, climate and the texture and habit of body exert a kind of original and forcible jurisdiction; and I am authorized in advancing this assertion, when I consider that the fiery temper of the Moor and the gallantry of the Italian, have been referred to their proper sources, while that disposition less

dependant on materialism, the credulity of the British in matters unconnected with religion and superstition, together with many others of the same nature, has never as yet been satisfactorily accounted for.

All kinds of credulity have been denominated the children of ignorance; but when I reflect that credulity, in matters unconnected with religion and superstition, is one of the most prominent characterizing dispositions in the mind of the British, and that the British nation, far from being the most ignorant, is indisputably the wisest of all nations, I look with contempt on such an unaccountable maxim; and, as it is evident, that, in acuteness, warmth, and refinement of feeling, we are equalled, if not surpassed, by many other nations, I regard in an equally unfavourable light those theories which refer it to any superiority of the British in these respects, or, in fine, to any thing in the least connected with materialism.

If I might be at all allowed to endeavour to account for its cause, it would, instead of being in a manner disgraceful to the nation, be on this, the most honourable of all principles—that as every true Briton is a being incapable of guile, he expects that all other men are as honourable as himself.

As, previous to the invention of printing, the authors of Europe confined themselves principally to the studying of Metaphysics and Theology, it is impossible to ascertain at what era the British began to be remarked for this particular credulity; but if the principle to which I have referred its existence be just, it is evident that its origin is the child of no very modern period. After the invention of that art, investigation embraced a larger field; literature assumed a new aspect; dispositions, customs, and manners, which had before been thought unworthy of notice, daily became more and more the topics of observation; and the subject of which I am now treating occupied often, and at a great length, the pages of the philosopher and manner-painter. In the eighteenth century it seems to have been more descanted on than at any former period, and the alarm excited during that epoch by the reports of the excursions of mad-dogs and mad-bulls, the reliance placed on the truthless narrations of travellers and navigators, and on the nostrums of impudent quack-doctors, have all been made the subjects of discussion, in a manner both lively and interesting.

To prove from the relation of a few facts which have not as yet employed the pen of the philosopher, and the greater part of which came under my own immediate observation, that this credulity exists among the British at present with as much, if not with more, vigour than it has been proved to have done in the days of our ancestors, is the purpose of this essay.

I could adduce many proofs of the consternation excited by rumours concerning mad-dogs, and other wild animals, but I shall satisfy myself by narrating the following:

When I was, about four years ago, travelling in a mountainous district in the north of England, I was overtaken on the road by a shepherd, who, after having accosted me with the usual country salutation of "A fine day, sir," asked me, in a faltering tone, and with a face of terror, whether I had heard the alarming news. "What is it?" asked I. "O sir!" said he, "I have just now left a traveller, who told me, that a wild animal, called a lama—an animal with the head of a woman and the body of a lion, broke out three days since from the menagerie of Mr. Polito, on the Earthen Mound of Edinburgh—that it killed in Prince's street, three women and six children, four of the last of which it ate upon the spot—that it forced its way, without receiving hurt, through a company of armed soldiers, which the civil authority had called forth to oppose it—that it had slain several people in the country parishes adjoining Edinburgh, and that it was last seen devouring a flock of sheep among the wilds of Lammermuir. I am just now," added the shepherd, "going home to inform my wife, that she must keep our children within doors, that they may have a better chance of being safe, should the animal visit that part of the country, and I mean to give a similar advice to my brother-in-law, David Dobson, who lives about two miles from this, and who, like myself, has a wife and young family."

I am acquainted with an eminent lawyer, who, at the command of an April letter, rode twenty-four miles from his home, into a wild and uninhabited part of the country, to meet, on business of the most particular nature, a client, whom but three weeks before, he had seen set sail at one of our sea ports on a voyage to the East Indies; and I could name a company of yeomanry cavalry, in Scotland, which, some years ago, on the tale of a hedge gipsy that the French had landed in a quarter of the island, where it was nowise probable they

could effect a disembarkation, equipped itself in its war accoutrements, and hurried off to encounter them. I have frequently seen a man, who, when many schemes for raising money had failed him, artfully bedecked himself in a garb of goose feathers, and had himself for a whole day successfully shown, by a traveller of Italy, to the concourse of a large fair as an enormous sized non-descript fowl, new arrived from the coast of Coromandel. And the reader will, perhaps, have little difficulty in believing that the reliance on the nostrums of quack-doctors, continues as strong as ever, when he is informed, that the lately deceased Dr. Solomon, who was originally a poor black-lead pencil vender, was for many years enabled, from the extensive sales of his balm of Gilead, to expend more than £6,000 each twelvemonth for advertising his medicines in the newspapers, and that at his death, he was, besides being possessed of an immense sum of money, proprietor of Gilead-house, a house more like the palace of a king than the residence of a private individual; and that Signum of Manchester, a man, who but a few years since, was a journeyman stocking-weaver, in Roxburghshire, but who from a little skill in botany and chemistry, thought fit to commence doctor, now lives in one of the most splendid houses in Manchester, keeps his coach and livery servants, and promises fair to die with a fortune little short of Dr. Solomon's.

But to such length does this credulity carry us, that I have often known one Briton believe the report of another, although that report ran in direct opposition to the evidence of his own bodily senses.

It is a fact known, I dare say, to several of my readers, that not many years ago, a combination of medical men, by individually at short intervals of time, telling a wise and worthy gentleman who was quite well that his health was in a dangerous state, actually made him in a fever, take to his bed, and die. And I recollect, having once been a member in a winter evening's waggish party, in which an honest clergyman who had happened to fall asleep, was, by being asked when he awaked, to snuff the candle, which had before been, with the other lights of the room, intentionally extinguished, for the purpose of trying the extent of his credulity when his slumber broke up, made to believe from seeing no candle before him, that he had been so unfortunate, during his sleep, as to lose the use of his eyesight.

But the following is one of the most re-

markable instances of this nature I have yet heard :

A farmer travelling with his son in the parish of Eddleston, near Peebles, met on the high road with a youth who had sometimes traversed that part of the country, under the character of dumb, and being anxious to know how long the youth had continued in that melancholy state, he addressed him in a kindly and feeling tone, with the interrogatory, "How long is it, my young friend, since you became dumb?" "Three years," inadvertently answered the young man. "William," said the farmer, in a serious tone, and turning round to his son, "I am persuaded that this youth is not dumb." "Aye, father," said the son, who even yet never thought of disbelieving that the youth was incapable of speech, "you are as incredulous in these affairs as you have been in many others—you refuse to believe that the young man is dumb, although you have with your own ears heard him tell you so, from his own mouth."

At this answer of the son, the farmer became ashamed of his incredulity, and pursued his journey, now fully convinced of the folly and iniquity of starting such a doubt.

But however much the credulity of the English may, by some, be held out to be the subject of ridicule, it is at worst, if the principle to which I have referred its origin be true, but an innocent and honourable kind of failing: and I quote the following story of the late celebrated Dr. Goldsmith, not, indeed, as a proof of the credulity of the present time, for it is now many years since that great man left Britain to deplore his death, but as furnishing, in the doctor's answer in its termination, an excellent lesson to those who look upon the believer of a hoax, to be a foolish simpleton, and a proper subject for ridicule, and on the propagator to be a clever witty kind of fellow, and a being deserving the applause of the community.

It is reported that the doctor one day entered a side box in the Globe tavern, Fleet street, where an acquaintance of his was reading a newspaper, and after ringing the bell, he ordered the waiter to bring him a mutton-chop and a pint of Madeira. The command was obeyed, and the waiter had no sooner left the room than the face of Goldsmith's acquaintance put on an expression of disgust and indignation, and upon the doctor's asking him what had offended him, he was answered that he was astonished how any waiter could have the audacity to present a gentleman with a piece of

mutton, which, from the nauseous smell it emitted, could not have laid in the Globe tavern larder for less than a month; and he added, that such audacity deserved, if not death without benefit of clergy, at least an unmerciful chastisement with the cane. On this Goldsmith began to examine the chop, and coming to the decision that it had a smell more offensive than asafetida, resolved on the propriety of punishing the audacious waiter; but declared, that instead of taking the severe method of caning him, he would be contented by forcing him to swallow in presence of them both, the abominable and highly insulting chop. The waiter was accordingly called, and after the doctor reprimanding him for presenting such a chop, and told him with what severity of castigation he would meet, were he punished conformably to the enormity of his crime, he mentioned the punishment meant to be inflicted, and ordered him without delay to proceed to the allotted meal. The waiter was, by the furious menaces of the doctor, frightened into compliance, and when he had performed the task, he left the room. He was no sooner gone, than Goldsmith's companion burst into a fit of loud laughter, and on the doctor requesting to be informed of the cause of his mirth, he answered him thus—"I am astonished how a man of your genius and learning should be so easily imposed upon. The mutton-chop was one of the finest and freshest I ever beheld." And he was still continuing to laugh, and without mercy to rally the doctor on the greatness of his credulity, when Goldsmith replied, "Well, well, you may amuse yourself with the success of your hoax, as long as you have a mind; but let me tell you, I shall never again believe a word of what you say; so, friend, I think I am even with you."

G.

Agriculture.

ON THE HESSIAN FLY.

BY JAMES WORTH.

(Concluded from p. 367.)

In tracing the insect through the last year, I have found it a much more formidable foe than I had before imagined, and I have been mistaken in some of my former impressions—as in my communication to the Philadelphia Society for promoting Agriculture, I recommended early sowing. My opinion was predicated on the idea that the broods were deposit-

ed at regular periods, and completed in a very short time. As soon, therefore, as I supposed the August deposit to have been finished, which I concluded was about the twenty-sixth, I had a small lot prepared and sowed on the thirtieth, calculating that there would not be another deposit before October, and that I could guard against it by pasturing. In this I have been entirely mistaken; for the fly commenced its operations on the wheat soon after the young plants appeared, and was continually followed by others, as long as the weather permitted; so that there is but little prospect of a crop. The wheat now growing in this neighbourhood has been sown at several different times, and, except the very late, has a good deal of the larvæ of the fly lodged among it; and I fear that, should the spring prove unfavourable, much damage will be sustained: nevertheless, we shall have an opportunity of gaining some information as to the best time of sowing. The wheat that takes the earliest growth in the spring, will unquestionably fare the best, and hence the advantage of manuring and selecting the earliest kinds; and thus it is that rye succeeds. But we must not suppose that we can thereby entirely overcome the fly; for we should ever bear in mind, that it only prefers the weakest plants and a particular kind, and in case of necessity, will most assuredly attack the strongest and *any* kind, and probably even a different plant. Depend upon it, it will never starve while it can get any thing to eat. When I hear a person say that he has not suffered by the fly, I take it for granted that he has manured well, or that he has a neighbour that the insect likes better. How was it when the yellow-bearded wheat was introduced on Long Island, and afterwards into this county? It answered a good purpose to those who first procured it, but in the same degree it injured them that continued the old kind; and so I presume it will be with the Lalor wheat now trying in Virginia and other places: indeed I think it probable, that any new kind, of early spring growth, may serve a temporary purpose to him who first cultivates it, but it is, I fear, only a decent way of injuring a neighbour; nor do I find that any general advantage attends the not sowing next to a stubble field, for the wheat *nearest* thereto will be the most injured, whether it is alongside or a mile off; but something will depend on

the direction that the fly may be driven by winds, or obstructed by other circumstances: and with respect to pasturing, I will relate a case stated to me by my friend Anthony Taylor. Some years ago, on the twenty-third of April, he turned his sheep on a lot of wheat, and kept them there until scarcely a vestige of the plants was to be seen. It was supposed by his neighbours that his crop was entirely destroyed; nevertheless it soon recovered, grew in the most even and beautiful manner, and yielded upwards of thirty-five bushels per acre. The inference I draw from this experiment is, that it was most fortunately timed, and the wheat was so completely cut off by the sheep, that the fly had no place left to deposit on, and that the eggs of that brood were all laid before the plants had thrown up new shoots; so that the fly was compelled to pass into the adjacent fields; and his neighbours suffered by his good fortune; or it may have been that the caterpillars had not passed from the leaf, and were actually devoured by the sheep, and an abundant crop of wheat was the consequence: but in the former case it may well be questioned, whether the practice would promote the general good, and a further doubt might arise, when we consider that there is such a wonderful disposition in some insects to secure the continuance of their species, that their sexual intercourse does not take place until a provision is made for their offspring, and therefore will sometimes remain in the fly state much longer than at others. Now in the spring, the Hessian fly appears to live only a few days; as the plants upon which it deposits being then in a state of rapid growth, there is no time to be lost; but if we were all to pasture our wheat, its existence would probably be prolonged until the plants became suited to its purpose; and by sowing it later in the season, an injury rather than a good would result, unless the pasturing was done immediately on the appearance of the spring deposit. I would then suggest the expedient of feeding the insect in the least expensive manner, that is, to procure an early kind of wheat, and sow it for the crop; then sow on the same ground about a bushel (perhaps half that quantity might do) to the acre of the common or late kind, for the fly. I have no doubt but it would select its favourite sort, and the only loss would be the wheat

sown. It is asserted, that sowing radish among turnip seed, will preserve the latter from the ravages of a fly to which it is subject. I have not had an opportunity of testing its truth, but think it probable; and if such is the fact, it must be simply owing to a preference which the fly has for radishes, and there must be enough sown to supply food until the turnips shall have formed the rough leaf. It is truly astonishing what nice distinction some insects make in the choice of their food, and how difficult it is to force them from their favourite; and yet, when compelled to change, they are equally voracious in devouring the new plant, and in some instances afterwards prefer it. It will be perceived, that by sowing two kinds of wheat, over the whole field, and the fly preferring one, the destroying it would only thin the plants without injuring the crop; whereas sowing an equal quantity of one kind, would not answer the same purpose. But this expedient will be attended with difficulties; for it must be evident, that by sowing the two species together, a mixture of kind would take place, which would prevent our deriving any advantage from their separate qualities; consequently it would become necessary, continually to obtain seed from other places, or sow some of each sort on separate lots for that special purpose.

A difference however prevails as to the manner in which the mischief is produced, that is, whether it is done by pressure upon the stem, or by the caterpillar feeding on the juices of the plant; the former appears to be the prevailing opinion, and it is supported by many persons of the most respectable character; and if that point can be established, perhaps a kind of wheat may be found, that will resist such pressure; but it appears to me, that the indentation of the stem, is occasioned by the extraction of the sap, and in no other way can I account for the rapid decline of a young healthy plant; its growth is almost immediately stopped, and in a few days a change of colour takes place. I have never discovered such effects to be produced on any plant, by mere pressure on one side; indeed in this case I doubt there being much pressure upon the stem, as the covering would, I think, be first loosened; having therefore no confidence in the doctrine of pressure, as here applied, I must leave to its advocates, the discovery

of a remedy, and I wish them all possible success.

When the wheat fields make a good appearance, we are unmindful of the fly; and yet I believe, that every crop is more or less injured, and that even in a favourable season, the produce is, on an average, lessened one-fourth in quantity, and sometimes more than one-half. Shall we then submit to a devastation of such immense magnitude? Shall man, to whom was given "dominion over the fish of the sea, and over the fowl of the air, and over every living thing that moveth upon the earth," be robbed of his very bread, by so mean an insect? And besides, the brood which seems to be the very one that we ought to attack, is mostly destroyed for us, leaving only about one-tenth part for us to overcome. Nothing short of destroying or crippling the insect ought to satisfy us; but owing to our practice of finishing the course of grain crops with wheat, and sowing grass seeds among it, our purpose cannot be effected; and the wheat continuing to shoot up among the grass, for one, and sometimes two years after, offers food and safety to the fly. I will then propose to change the course of cropping; that is, commence with wheat, and immediately after harvest, burn the stubble and plough the ground, so as to prevent the insect from maturing; or perhaps a better plan would be, to plough the stubble, which would destroy the pupa by covering it in the soil, and would cause such a quantity of plants to spring up, as would be sufficient to receive the next deposit of such as might escape from the covering or come from other places; and by again ploughing, the larvæ would mostly perish. And we must also use every precaution respecting the straw that is hauled out of the field. I would prefer putting it in a close barn, and covering it with hay, or something that would prevent the fly from evolving; but if it must be stacked, pay great attention to the plants, which may spring up from the scattered grains, nor must we forget rye and barley.

The reason why the early sown wheat does not succeed better, may in some measure be owing to its partial observance, and the fly being so much more numerous than the plants, such a quantity is lodged on each, as destroys the very roots; but a vast number of the larvæ perish for want of food; and the more so if early sowing was entirely omitted, con-

fining the fly to the stubble fields; for I have uniformly found, that the eggs are distributed, according to the quantity of plants that are in a suitable state. Now if we were all to sow early, I believe that such would be the small number allotted to each plant, that the roots would resist the attack; but as this is a matter which cannot, or rather will not be attended to by all, and as it would unquestionably have a tendency to nourish and increase the insect, it will most likely be safest to adopt the general practice of our neighbourhood, in sowing the last of September, or first week in October; but on no account defer it later, for it is certainly of consequence, that the plants should be well rooted before winter sets in, and it has been remarked, that the latest sowing sometimes suffers the most, no doubt owing to its backward state in the spring, and I believe there is some advantage in having the grain well covered at the time of sowing, and this may be the reason why some choose to plough their seed in.* Next to the wheat crop, I would recommend corn as the better to clean the ground, and then end with oats and grass; or if the present course should be preferred, omit sowing grass seeds among the wheat, and after harvest, burn or plough in the stubble as afore-mentioned, and prepare the ground particularly for a grass crop. I really see no other way of getting rid of this enemy, and I have thought much on the subject. If a better plan can be devised, I most heartily invite it, and I call upon every member of the committee, and upon every member of the society, to make the attempt. I by no means consider the case as fully developed; but I am persuaded, that if all who are interested, will attend to it properly, an ample remedy can be found; for although man is doomed to "eat bread in the sweat of his face," yet I firmly believe, that in every instance, where he faithfully exer-

cises the high powers with which he is endowed, he will be enabled to accomplish his utmost wishes. It is surely high time that something decisive should be done in the case now before us, and can there be a more favourable time than the present, when there are numerous societies formed in different parts of the country, all having the same objects in view, and by uniting in the same plan, could carry it into general operation, and thereby insure success? Now I want our society to take the lead in this very important work, not only as it regards the insect immediately under consideration, but all others which may be found so ruinous to the agricultural interests.

I will mention the locust (*Cicada septemdecim*) as likely at some future period to destroy all our forest and fruit trees. The year before their last visit, I planted an apple orchard, which was so injured by them, that the trees generally became sickly, and I believe I should have lost the most of them, if I had not lopped off the wounded parts, and in some instances I found it necessary to take the whole head off. And when I reflect on the serious damage which has frequently been sustained by the ravages of several species of insects, I am led to believe, that under certain circumstances, our crops may be entirely cut off by them, and if not timely attended to, we may experience that most dreadful of all scourges, a famine in our land. The insect tribe, though mean, is perhaps the most mischievous of all the animal creation, and when we consider its prolific nature, how careful ought we to be, to protect that link, which seems intended to keep it within its proper bounds; I allude to birds: I have already recommended them to the notice of the society, and I earnestly beg, that they may not be any longer neglected. Even toads and snakes are calculated to serve the purposes of man: and I must also recommend the more frequent use of that valuable implement of husbandry, the roller, not only for the better culture of our crops, but as destructive to insects. The late Mr. Bernard M'Mahon, speaking of the turnip crop, says, "the all important point is, that the rolling of the ground is experimentally found to be the most effectual method hitherto discovered for the preservation of the rising crop, from the destructive depredations of the fly. The turnip fly is always found most numerous on rough-worked ground, as

* I have observed that plants having no depth of root were destroyed, whilst those having their roots sufficiently covered resisted the attack, and I presume the difference to be owing to the situation in which the grain is placed, because *there* is the dividing point betwixt the radicle and plume, and, therefore, where the grain is well covered, the base of the stem will be below the surface of the ground, and the embryo bud which is prepared to throw up a new stock, being there formed, is protected by the soil; whereas the buds that are formed at the surface, are destroyed by the fly, and consequently the whole plant must perish.

there, they can retreat and take shelter under the clods and lumps of earth, from such changes of the weather as are disagreeable to them, or from the attacks of small birds and other animals."

Perhaps I have already been too prolix, and may have wandered far in the maze of conjecture; but on a subject of so great moment, I was desirous of throwing out every idea that I possessed, however strange some of them might appear, and as the inferences which I have drawn, are grounded on the premises laid down, every person can judge of their propriety, and none will be deceived by my errors. I submit my views to the examination of the committee, and rest, respectfully, your obedient servant,

JAMES WORTH.

Science.

Compiled for the National Recorder.

Natural History.—M. Drapieu, professor of chemistry and natural history, and one of the editors of the "Annales Generales des Sciences Physiques," has substituted with success, in lieu of the poisonous matters employed in preserving objects of natural history, a soap composed of potash and fish oil.

He dissolves one part of caustic potash in water, and adds to the solution one part of fish oil. He rubs the mixture until it acquires a pretty firm consistence. When it is completely dry, he reduces it to powder with a rasp. One part of this powder is employed in forming a soft paste or liquid soap, by means of an equal quantity of a solution of camphor in musked alcohol. This liquid soap is well rubbed upon the skin of the bird, previously cleared of its fat, and the other part of the soap, in powder, is plentifully scattered between the feathers. Thus prepared, the bird is placed in a moist situation, in order that the particles of soap may soften and attach themselves perfectly to the feathers and the down of the skin. It is afterwards put in a dry place. By this means it completely resists the attacks of larva, and has neither the danger nor the inconvenience of arsenical preparations, which, as is well known, stains and spoils the extremities of the feathers and down.

Anatomical Model, representing particularly the myology of a human body.—M. Ameline, professor of anatomy of the

school of Caen, has just invented and composed an anatomical model of a human body of the natural size. This model is formed, first, of real bones, which constitute the skeleton; 2d, of muscles made of pasteboard, which, after being softened and fashioned true to nature, are covered with fine blades of hemp so as to imitate the muscular fibres, and afterwards painted of a natural colour; 3d, of threads and cords of catgut, covered with coloured varnish so as to resemble arteries, veins, and nerves; 4th, of real hair on those parts to which it belongs. By means of this exact image of the structure and colour of the organs which compose the human body, students may examine with facility parts which it is very difficult to observe accurately in a dead subject. This model presents the parts under their various aspects, admits of their being handled, detached, and separately studied, without altering their natural forms. It serves too for demonstration, when the heat would not admit of dissection, and especially to persons who have a natural repugnance to these operations.

Gas Illumination.—At a meeting of the citizens of Hull, in England, on the 15th of January, after a discussion on the respective advantages of gas from coal and gas from oil, it was unanimously agreed to adopt the latter for the purpose of lighting the town. It was stated that oil gas is free from the offensive smell of gas from coal; that it does not corrode the pipes, nor tarnish nor discolor polished metals, silks, &c.; that it is used in Covent Garden theatre, in the Argyle Rooms, in Whitbread's brewery, and some other places; and that 1000 feet of oil gas will produce light equal to 3333 feet of coal gas. It appears that the emperor Alexander is lighting up his palace at St. Petersburgh with oil gas.

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